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The Principles of Language Learning Theory: Can They Be Used Effectively in the Language Classroom?

Bruce Labentsoff

Introduction

The purpose of this article is to develop awareness and understanding of how learning theory can influence language acquisition. In addition, one objective is to help broaden the repertoire of techniques that language teachers have available to them so that they can improve their learners' rate of acquisition and assist students to communicate more effectively in foreign languages. This article also examines our current knowledge of learning theory, learning strategies and related concepts of practical applications with the hope that instructors can relate these theories to their own ideas about the nature of language and how it is learned. This article also probes to determine how we as teachers may utilize learning theory to enhance our own classroom practices, and how we may mature with the continuous evolution of optimizing language learning.

The article is organized as follows. Since most language learning theories have evolved from learning theory, this article begins by highlighting four main theories of learning. Following that, the article focuses on language learning strategies and later uses a strategic learning model to demonstrate how these learning strategies can be applied to a full program in a classroom. Subsequently, reacculturation is used to draw a comparison of two learning processes: cooperative learning and collaborative learning. The

comparison suggests that while the two learning processes are quite similar, the results they produce are sufficiently different and the use of one process over another requires careful consideration.

As the different countries of the world draw closer and closer to each other we are becoming increasingly more dependent on one and other as citizens of the world. Hence the need to know more than one language has produced a new field of study: second language learning research. It is, however, in its beginning stages of development, yet has already influenced how people approach teaching and studying a new language.

Since most language teachers have been trained to teach a language other than examine the processes of how their students are learning that language, a tremendous amount of wisdom goes uncollected daily. Nevertheless almost every achievement in the classroom is directly related to how well a student learns. Language instructors sometimes claim that teaching is a practical activity which has little to do with theory, and Stern's (1983) findings support this generalization. However, he goes on to claim that all teachers hold inherent theories which dictate their teaching whether they are aware of them or not. Hence the methodologies, practices and procedures all teachers use are related their own basic theories of how someone learns a language.

Behaviorist Orientation

Although learning has been defined in many ways, most definitions include the concept of behavioral change and experience. Behaviorism relies on three basic assumptions. First, observable behavior rather than internal thought processes is the focus of study. Here learning is manifested by a change in behavior. In the second assumption, the environment shapes one's behavior; what one learns is determined by the elements in the environment and not by the individual.

And third, the principles of contiguity and reinforcement are central to explaining the learning process.

Edward L. Thorndike, a researcher and learning theorist, used stimuli and response to formulate three laws of behavioral learning. The Law of Effect states that learners will acquire and remember responses that lead to satisfying aftereffects. The Law of Exercise asserts that the repetition of a meaningful connection results in substantial learning. The Law of Readiness notes that if the organism is ready for the connection, learning is promoted, and if not, learning is restrained. Though these laws were later modified by Thorndike himself, they still remain popular and are widely used in educational settings.

Behaviorism was developed as a theory of learning mainly by B. F. Skinner who made major contributions to what is known as "operant conditioning." Simply stated, this means "reinforce what you want the individual to do again; ignore what you want the individual to stop doing." If behavior is reinforced or rewarded, the response is more likely to occur again under similar conditions. Behavior that is not reinforced is likely to become less frequent and may eventually disappear. Skinner's work indicates that since all behavior is learned, behavior can be determined by arranging the contingencies of reinforcement in the learner's immediate environment.

In Skinner's view, the teacher's role is to design an environment that elicits desired behavior toward meeting preferred objectives and to eliminate behavior that is not desirable. Several educational practices can be traced to this type of learning and it has had a profound effect on education in general. However, it has been challenged from two very different perspectives: cognitivism and humanism.

Cognitive Orientation

Psychologists later challenged behaviorism and criticized it for

being too concerned with a single event and action, and for being too dependent on overt behavior to explain learning. They proposed looking at the whole rather than its parts, at patterns rather than isolated events. These views have been incorporated into what have come to be labeled as cognitive or information-processing learning theories.

Cognitive learning theories use perception, insight and meaning as the key contributions to learning. Cognitivists believe the human mind is not just a passive exchange system where the stimuli arrive and the appropriate response is output. Instead, the thinking person interprets input sensations and gives meaning to the events that influence their consciousness. Here the learning process involves the reorganization of experiences so that sense can be made of the stimuli from the environment. After pondering a problem, the learner uses all the ingredients necessary to arrive at a solution and assembles them cognitively; first one way and then another until the problem is solved.

Therefore a major difference between cognitivists and behaviorists is the location of control in a learning activity. For behaviorists, it lies in the environment, while for cognitivists it lies with the individual learner. The cognitivist view of learning suggests that learning is meaningful only when it can be related to concepts which already exist in a person's cognitive structure.

Humanist Orientation

Humanistic learning theories imply that there is a natural tendency for people to learn and that learning will flourish if nourishing, encouraging environments are provided.

Considered to be the founder of humanistic psychology, Abraham Maslow (1970) proposed a theory of human motivation based on a hierarchy of needs. At the lowest level of the hierarchy are physiological needs such as hunger and thirst, which must be

attended to before one can deal with needs of personal safety, security and protection. The remaining levels involve a sense of belonging and love, self-esteem, and finally, the need for self-actualization. This need can be seen as a person's desire to maximize his or her full potential. The motivation for learning emanates from the learner and is naturally intrinsic.

For Maslow (1970), self-actualization, striving to reach one's full potential is a human desire for learning and educators should channel their efforts into achieving it. Humanism emphasizes a person's perceptions that are centered on experience, as well as freedom and responsibility to develop oneself, and therefore stresses self-directedness and the value of experience in the learning process.

Social Learning Orientation

Social learning theory posits that people learn from observing other people. Since such observations take place in a social setting it is labeled observational or social learning. Drawing from stimulus-response and reinforcement theory, some social learning orientation theorists argue that people do not learn from observation alone — rather, what has been observed must be imitated and reinforced. Hence, if imitated responses were not reinforced, no learning would take place. However, other theorists claim that learning can take place without imitation and that learning can be vicarious. Here, virtually all learning results from direct experiences that occur on a vicarious basis through the observation of other people's behavior.

Observational learning is influenced by three processes of attention: retention or memory, behavioral rehearsal, and motivation. Before something can be learned, a model must be observed and thought to be competent, powerful, attractive and so on. Subsequently, information will be stored for future use when the individual learner is motivated enough to act upon it.

Furthermore, learning is a function of the interaction of the person, the environment, and the behavior. Social learning theories contribute to adult learning by highlighting the importance of social context and explicating the processes of modeling and mentoring.

In addition to the four different learning orientations described above, several other theories exist. The behaviorist, cognitivist, humanist and social learning orientation previously discussed are able to give some insights into adult learning. Each attempts to illustrate the nature of how people learn using various assumptions. Instructors and curriculum designers can use these theories to clarify their own beliefs about learning and, in the following section, try to determine how learning strategies may be adapted to improve language acquisition in their own classroom situations.

Learning Strategies

Language learning strategies are techniques that language learners use as individuals to help themselves affect their own learning. They are thoughts or behaviors often carried out as a part of the natural learning process and unless the learner has received training in using learning strategies, many times the learner will be completely unaware he or she is employing them.

To further clarify, language learning strategies are to be differentiated from communication strategies and study skills. Firstly, learning strategies relate to intake, storage and retrieval systems, while communication strategies deal with output and expressing meaning by verbal and non-verbal mechanisms. Learning strategies can also be differentiated from study skills such as note taking and writing summaries. As defined by O'Malley and Chambot (1988), study skills are overt behaviors that help learning, whereas learning strategies are usually non-observable strategies such as inferencing, elaboration and self-talk.

Brown (1987) surmised that numerous styles and strategies are

present within an individual learner and that hundreds of cognitive profiles may exist making it extremely difficult for the teacher to aim at a single profile. If we as teachers are aware of the factors that affect language acquisition and the various strategies that exist, we will be in a much better position to help our students optimize their learning efforts.

Under the hypothesis that good language learners use successful learning strategies, a study of successful language learners in Toronto set out to determine which strategies produced the most effective learning (Naiman et al. 1978). This study, although not completely conclusive, spurred further research to determine those strategies which help optimize learning. In an extensive study based on cognitive psychology performed by O'Malley and Chamot (1990), three main classifications of strategy were defined.

i.) Metacognitive strategies involve processes in planning and thinking about learning, monitoring one's own comprehension and production and then evaluating one's own achievement.
ii.) Cognitive strategies use conscious methods to approach learning, such as making mental images, elaborating on previously acquired knowledge or classifying items into meaningful groups for better use and retrieval.
iii.) Social/Affective strategies are achieved by interacting with another person to gain assistance. Some examples are cooperative learning, asking the teacher questions for clarification and using mental processes to reduce the stress or anxiety related to a learning task.

This study revealed and confirmed earlier beliefs that "good language learners" (notably efficient learners) have a large range of language learning strategies and that these learner are quite skilled at choosing and executing a suitable strategy whenever necessary and it is believed that this is the reason they are such effective

learners. Teaching students new strategies may not always be effective since individual learners have their own learning preferences. An alternative to this may be found in the textbook 'Learning to Learn English', by Ellis and Sinclair (1989) which approaches the subject by building awareness and allowing learners to discover the learning strategies that are suitable for them. This approach is common in various instructional models of strategic learning. The following theoretical model demonstrates the implementation of language learning strategies in the classroom.

Instructional Model

As research is steadily uncovering the behaviors and techniques used by good language learners, educators are eager to apply this knowledge in real classroom situations. One theoretical model developed by O'Malley and Chamot (1990) demonstrates how the learning strategies outlined earlier can be used in a classroom. The Cognitive Academic Language Learning Approach (CALLA) was designed for limited English proficient students in upper elementary and secondary schools. CALLA will serve as an example of how learning strategies can be applied. It should be noted that this framework has been targeted at a specific group of learners and must be adjusted to accommodate and reflect the various personality styles, cultural differences and administrative demands that exist in other situations.

The CALLA framework assumes that language is a complex cognitive skill that develops through a series of stages and requires extensive practice and feedback. In addition, students participating in the program must be at a sufficient level of proficiency in the new language to be able to use the language as a learning tool.

The CALLA program focuses on three components which are approached simultaneously during instruction: real content-based materials, academic language skills, and learning strategies for

content and language. First, the content prepares limited English proficient students for what they will encounter in their mainstream curriculum, but it does not duplicate the mainstream curriculum. Instead, CALLA instructors take content which is considered demanding, and provide additional contextual support to make new material more comprehensible. This is done by using demonstrations, visuals, hands-on experiences and most importantly by teaching students to apply learning strategies to understand and remember the content. Second, academic language skills such as reading, writing, speaking and listening are developed using a whole language teaching approach. The various skills above are applied directly to the content mentioned earlier. For example, students may be asked to write a summary of a reading they did beforehand or to make a short presentation based on new knowledge they recently acquired. Lastly, the key component in the process is the instruction in learning strategies.

The CALLA program is based on an approach with the following four main propositions:

i.) Learners that are mentally engaged actively learn more effectively.
ii.) Strategies can be taught and using them will make a student more efficient than someone who does not use learning strategies.
iii.) Once students have become accustomed to using a learning strategy, they transfer and apply those skills to new tasks.
iv.) Learning strategies make learning academic language more effective.

Again, this program operates based on a whole language approach and concurrently applies these components in a context rich environment allowing learners to tackle often demanding academic language effectively. For a portion of each lesson CALLA

recommends using cooperative learning activities because they provide learners opportunities to work with peers to negotiate for meaning, to clarify their understanding of learning strategies and also to provide learners a chance to activate their academic language skills in a tolerant and trusting environment.

When compared to the CALLA program above, other researchers on strategic learning suggest fundamentally the same flow and sequence of instructional activities (Hosenfeld et al. 1981; Jones et al. 1987; O'Malley and Chamot 1988; Weinstein and Underwood 1985 in O'Malley and Chamot 1990). In each, the instructor defines and evaluates the learning strategies that are already being used by the learners. Instructional sequences for learning strategy instruction commonly begin with the teacher developing a general awareness of a strategy followed by an explanation and demonstration of the strategy. Next, the instructor will explain the strategy's significance and usefulness. Afterward, the students are given opportunities to practice, typically through cooperative learning, role playing, peer tutoring as well as scaffolding instruction (Jones et al. 1987). Typically in the last stage of a sequence, guidance is given on determining appropriate applications for the strategy, followed by evaluating the strategy's worth in alternative situations.

Strategic learning usually recommends cooperative learning activities because they improve performance by allowing students to clarify their understanding of previously presented material in small group situations. Furthermore, these activities provide additional circumstances for students to use academic language skills for a learning task. Since cooperative learning is considerably different from traditional classroom methodologies, yet quite similar to collaborative learning, the following will compare cooperative learning and collaborative learning using a reacculturation model which was proposed by John Schumann (1978).

Reacculturation

Recently university teachers and administrators have discovered the educational benefits of reacculturation when someone tries to join a new group or community. By reacculturation, we mean learning and trying to be part of a new community. For example, those with the desire to become a chemist must make efforts to associate themselves with the discipline of chemistry and incrementally and successively develop the knowledge of chemistry within themselves until they finally join the community of chemists. The acculturation model was presented in 'The Acculturation Model of Second Language Acquisition' in R.C. Gingras (ed.) Second Language Acquisition and Foreign Language Teaching, CAL . . . and said that successful language learning was achieved by imitating the members of the target community. In most cases, reacculturation is a complex and painful task. However, it can be made easier by joining a transition community with similar goals and objectives. People generally move from one group to another group best in a group because the collective interests help empower each person individually.

Paulo Freire (1970) stresses that educators must adopt and show confidence in the fundamental understanding in learners' ability to learn. He recommends that teachers move away from directed lecture style classes and work as group facilitators, allowing students a chance to learn. In other words, under the guidance of a facilitator, given the opportunity, these transition communities will construct knowledge as they interact with each other.

Cooperative and collaborative learning, both utilize the concept of allowing students to join transition communities, talk together and develop knowledge within the group. The following discussion compares these two often undifferentiated classroom methods and the different outcomes each generate.

Cooperative Learning

Cooperative learning replaces the passive reception of didactic instruction by first trusting that learners can learn in autonomous groups and then expanding their roles to that of active seekers of knowledge. Cooperative language learning gives students an opportunity to work together cooperatively to achieve shared learning goals and jointly complete assignments and specific tasks. Cooperative learning creates groups of two or more students to, for example, write a report, solve a problem, learn vocabulary or answer questions after a reading.

Seating students in a group and asking them to work together does not, however, in itself constitute a true cooperative environment as there are several ways these groups can diverge from learning by using cooperation (Johnson and Johnson 1989). In particular, groups working together occasionally tend to work individualistically or competitively which, at times, may circumvent the benefits of cooperative learning.

According to Johnson and Johnson (1989) there are five essential elements that teachers need to structure into each lesson in order to ensure that cooperation will occur among learners. First, the group must establish a milieu of positive interdependence and work towards achieving mutual learning goals as a team. At the same time as learning the lesson goals, every person must make sure each of the other members in their group are learning too.

The next element is individual accountability. Since, cooperative learning strives to make each person in the group stronger as an individual, every member is responsible to do his or her share of the work involved and learners should be firmly discouraged from shirking their responsibilities or from hiding within the group. Opportunities for cooperative and individual work are necessary and a balance of both is crucial for achievement.

The third element promotes face-to-face interaction and demands

working together to help the entire group. Students are to assist other group members and are to provide support and encouragement to solve problems and complete assignments. Consequently, the instructor should encourage individual expression and concern for other group members' progress and understanding.

Next, the fourth element draws upon each person's social skills so they can cooperate. If necessary, students must be taught and be able to command leadership, decision-making, trust building, communication and conflict-management skills to be used throughout group interactions (John D.W. 1993).

Lastly, groups need to discuss how well they are achieving their goals and meeting their objectives. This is done by a procedure known as group processing which provides the group with an opportunity to discuss which member's actions are helping and which are not. This provides feedback on each member's participation and helps everyone to focus on improving the group's overall effectiveness.

Collaborative Learning

Collaborative learning shares much of the same infrastructure found in cooperative learning. In both collaborative learning and cooperative learning the main principle of functioning interdependently remains central. Both types of learning allow the students to join transition communities which have approximately the same level of interlanguage. This environment should be sufficiently relaxed and non-threatening so as to promote risk-taking and enable leaners to gamble with their language (Rubin 1975).

As well, each learning process concomitantly encourages self-direction for learners. Self-direction is an important element when someone is learning a new language and is essential to the active development of abilities (Rubin, 1975). Cook (1991) shares a similar view and writes 'Poor students are those who depend on the teacher and are least able to fend for themselves. The students must be encouraged

to develop independence inside and outside the classroom.' She also points out that learner-training begins to resemble self-directed learning as good language learners take responsibility for their own learning. Students have been shown to have more control of their environment when they choose their goals, apply their own strategies and even assess their own progress.

As mentioned before, an important goal of cooperative learning is to make all students accountable for learning collectively as a group and thus discouraging competition. Collaborative learning, on the other hand, does not ask individuals to be accountable for the entire group. Nevertheless it does not deliberately seek out a competitive environment. Cooperative learning encourages that students know and use a variety of social skills so the group remains focused and that each person participates and makes an equal contribution. This is sometimes accomplished by randomly testing one person in the group and assigning that grade to the entire group. Alternatively, by observation, the teacher can assign one grade to a group based on how everyone works together. However, collaborative learning assigns a much reduced role for the teacher who is conversely not responsible for encouraging equal participation among students working within groups. It also assigns no social responsibilities to the learners as in cooperative learning and gives the learners complete control of the group itself. Moreover, collaborative learning suggests that the students take responsibility for their own group's management and handling of procedures and it asks teachers to minimize their intervention to permit the group to proceed and function along natural lines of communication.

In addition, groups are responsible for choosing one person who acts as a reporter. This person will write a report about the group's discussion and, if applicable, its joint decision in a problem solving case. Afterward the reporter will speak to the class and act as a spokesperson for the entire group.

Lastly, the most distinctive difference of collaborative learning

is that it encourages conflicting ideas and dissent within the group. Collaborative learning assumes that one answer or solution to a problem is rarely complete and that if several possible opinions exist, no singly "correct" explanation should dominate. In addition, this process tolerates the fact that in language there may be a variety of sentence structures which produce an identical meaning and each can be equally correct. So while cooperative learning endeavors to reduce the amount of competition within these transition communities, collaborative learning attempts to cultivate a social structure which unfolds to help students gravitate towards becoming autonomous learners and more socially and intellectually mature.

Since cooperative learning provides more supervision and guidance it is seen to be more appropriate for children, while the thrust of collaborative learning is largely unsupervised and therefore enhances opportunities for students to become more critically engaged in their language learning. Since it is more representative of natural unsupervised human interactions in the real world, opposed to the controlled and sometimes artificial environments created in traditional classrooms, collaborative learning is better suited for university and adult learning situations.

Conclusion

In general, how teachers teach, select materials, implement strategies and manage their classrooms is largely dependent upon the learning theories they implicitly subscribe to. This article begins with the review of four diverse theories of learning: behaviorism, cognitivism, humanism and social learning. Language learning strategies are then examined and using the strategic learning model CALLA, the practical application of these strategies is demonstrated. Since most instructional models of strategic learning utilize cooperative learning as an effective means to provide practical application of strategies, it was described by means of comparison to a similar

process, collaborative learning. The comparison revealed that the two processes produced different results and that cooperative learning was more suitable to a less mature group of learners whereas collaborative learning, which was more comparable to real-world communication, corresponded better to learners which were more mature.

In the case of learners, the comprehensive conclusion of this article reinforces what is thought to be common knowledge in language learning — individual learners have different styles and preferred methods of learning. However, effective learners have a much larger inventory of learning strategies at their disposal than their less effective language learning counterparts. Effective learners can also use a series of strategies when they are involved in a learning activity to increase their overall learning efficiency. It was found that good language learners are also much more self-directed learners and in greater control of their learning. They also tend to depend less on their teachers, but still use them to clarify or verify certain items.

Regarding teaching, we have shown that language learning is a valuable skill which in fact can be taught to a learner and has a positive impact on a learner's abilities to learn a foreign language. Therefore by giving our students opportunities to develop their own knowledge of learning, we are influencing how they learn in our classroom, future classrooms and possibly how they will approach language learning for the rest of their lives.

Comments

Since teachers and researchers are a long way away from completely understanding how a foreign language is actually learned, we are operating in an incomplete environment which demands answers. Idealistically the amount of material taught by teachers would reflect an equivalent amount learned by students; a one-to-one

teaching learning ratio. Yet we are still very far from this one-to-one ratio which implies that the use of today's teaching and learning methodologies carry with them a great deal of inefficiency.

Along with this inefficiency society incurs tremendous waste; wasted energy, wasted time and wasted money. This paper offers some suggestions to help reduce this waste, but the true answers are locked away in the minds of our students. Therefore it is imperative that as researchers and teachers, we continue to search for the answers that will draw teaching closer in line with learning.

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